



## PATENT COOPERATION TREATY

# **PCT**

REC'D	10	JAN 2005
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## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416		on of Transmittal of International		
DMNZ20045PCT	International filing date (day/month/year)		Priority date (day/month/year)		
International application No.	International Thing date (auy/mon	un yeur /			
PCT/US03/22025	15 July 2003 (15.07.2003)		15 July 2002 (15.07.2002)		
International Patent Classification (IPC)					
IPC(7): F16L 27/00 and US Cl.: 285/27	6,353,384,321,89,148.28,148.4,23	34,273,272			
Applicant	AD A NIV				
DORMONT MANUFACTURING COM	APANI				
<ol> <li>This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</li> </ol>					
2. This REPORT consists of a total of 3 sheets, including this cover sheet.					
This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the					
PCT).					
These annexes consist of	a total of 4 sheets.				
I Basis of the re	I Basis of the report				
II Priority					
III. Non-establishn	nent of report with regard to no	velty, inventive	e step and industrial applicability		
IV Lack of unity	of invention				
V Reasoned state	ement under Article 35(2) with regard to novelty, inventive step or industrial				
applicability; o	itations and explanations suppo	rting such state	ement		
VI Certain docum	ents cited				
VII Certain defects	s in the international application	1			
VIII Certain observ					
Date of submission of the demand	Date	e of completion	n of this report		
10 February 2004 (10.02.2004)		November 2004 (	(15.11.2004)		
Name and mailing address of the IPEA/US		horized officer	0		
Mail Stop PCT, Attn: IPEA/US Commissioner for Patents	A Aai	ron M Dunwood	, Sourin		
	Alexandria, Virginia 22313-1450  Telephone No. 703-306-5771				
Facsimile No. (703) 305-3230 Form PCT/IPEA/409 (cover sheet)(July	Facsimile No. (703) 305-3230 Form PCT/IPEA/409 (cover sheet)(July 1998)				





### INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/US03/22025

I.	Basis	s of the report
1.	With	regard to the elements of the international application:*
		the international application as originally filed.
	$\square$	the description:
	2	pages 1-17as originally filed
		pages NONE filed with the demand
		pages NONE, filed with the letter of
	$\boxtimes$	the claims:
		pages NONE, as originally filed
		pages NONE, as amended (together with any statement) under Article 19
		pages NONE , filed with the demand pages 18-21 , filed with the letter of 20 May 2004 (20.05.2004)
	<b>N</b> 2	
	$\boxtimes$	the drawings:
		pages 1-15 as originally filed pages NONE filed with the demand
		pages NONE , filed with the letter of
		the sequence listing part of the description:
	لـــا	pages NONE as originally filed
		pages NONE , filed with the demand
		pages NONE filed with the letter of
2	. Wit	th regard to the language, all the elements marked above were available or furnished to this Authority in the
	lang	guage in which the international application was filed, unless otherwise indicated under this item.  see elements were available or furnished to this Authority in the following language which is:
	The	
1		the language of a translation furnished for the purposes of international search (under Rule23.1(b)).
		the language of publication of the international application (under Rule 48.3(b)).
l		the language of the translation furnished for the purposes of international preliminary examination(under Rules
١		55.2 and/or 55.3).
3	3. Wi	th regard to any nucleotide and/or amino acid sequence disclosed in the international application, the enational preliminary examination was carried out on the basis of the sequence listing:
	inte	
	┕	contained in the international application in printed form.
	L	filed together with the international application in computer readable form.
		furnished subsequently to this Authority in written form.
1	Γ	furnished subsequently to this Authority in computer readable form.
١	Ī	The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the
	-	international application as filed has been furnished.
		The statement that the information recorded in computer readable form is identical to the written sequence listing
		has been furnished.
	4. [	The amendments have resulted in the cancellation of:
l		the description, pages NONE
		the claims, Nos. NONE
1	_	the drawings, sheets/ <del>fig</del> NONE
	5	This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**
	* D	decompant sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in
	shie ee	mort as " originally filed" and are not annexed to this report since they do not contain amendments (Kules /0.10 and /0.17).
	** An	y replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

Form PCT/IPEA/409 (Box I) (July 1998)



### INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/US03/22025

V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement						
1. STATEMENT						
Novelty (N)	Claims 3,4,11-19 and 21-23	YES				
- • •	Claims 1, 2, 5-10 and 20					
Investigation (IC)	Claims 2 4 11 10 221 02	YES				
Inventive Step (IS)	Claims 3,4,11-19 and 21-23 Claims 1, 2, 5-10 and 20					
·	Ciumo 1, 2, 5-10 am 20					
Industrial Applicability (IA)	Claims 1-23					
	Claims NONE	NO				
Claims 3, 4, 11-19 and 21-23 the criteria set out in features as presented in the amended claims filed 20		teach or fairly suggest the				

Form PCT/IPEA/409 (Box V) (July 1998)







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#### We claim:

- 1. A fluid line connector assembly comprising:
  - a length of flexible tubing having a tubing end;
  - an end fitting rotatably supported on said tubing end;
- a sealing member compressively positioned between said tubing end and said end fitting; and,
- a retainer extending from said tubing end and engaging said end fitting preventing the axial removal of said end fitting from said tubing end.
- 2. A fluid line connector assembly according to claim 1, wherein said retainer is integrally formed on said tubing end.
- 3. A fluid line connector assembly according to claim 2, wherein said retainer includes a radially outwardly extending flared portion.
- 4. A fluid line connector assembly according to claim 3, wherein said flared portion is substantially frustoconical.
- 5. A fluid line connector assembly according to claim 2, wherein said end fitting includes a radially outwardly extending annular groove and said retainer extends into said annular groove.
- 6. A fluid line connector assembly according to claim 5, wherein said retainer is a projection extending outwardly from said tubing end.

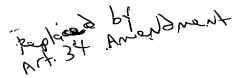




7. A fluid line connector assembly according to claim 6, wherein said projection is an annular projection.

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- 8. A fluid line connector assembly according to claim 1, wherein said tubing end includes a radially inwardly extending annular groove, and at least a portion of said retainer is received within said annular groove of said tubing end.
- 9. A fluid line connector assembly according to claim 8, wherein said end fitting includes a radially outwardly extending annular groove, and at least a portion of said retainer is received within said annular groove of said end fitting.
- 10. A fluid line connector assembly according to claim 9, wherein said retainer is a removable retaining ring.
- 11. A fluid line connector assembly comprising:
  - a length of flexible tubing having a generally cylindrical tubing end;
- an end fitting having an inside wall at least partially defining a passage through said end fitting, said passage adapted to receive said tubing end such that said end fitting is rotatably supported thereon;
- a sealing member sealingly disposed between said tubing end and said end fitting; and,
- a retainer extending radially outwardly from said tubing end beyond said inside wall of said end fitting such that said end fitting is axially retained on said tubing end.







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12. A fluid line connector assembly according to claim 11, wherein said retainer is integrally formed on said tubing end.

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- 13. A fluid line connector assembly according to claim 12, wherein said retainer is a radially outwardly extending flared portion of said tubing end.
- 14. A fluid line connector assembly according to claim 13, wherein said flared portion is substantially frustoconical.
- 15. A fluid line connector assembly according to claim 12, wherein said retainer is an outwardly extending projection.
- 16. A fluid line connector assembly according to claim 15, wherein said projection is an annular projection.
- 17. A fluid line connector assembly according to claim 15, wherein said end fitting includes a radially outwardly extending annular groove, and said projection is received within said annular groove.
- 18. A fluid line connector assembly according to claim 11, wherein said tubing end includes a radially inwardly extending annular groove, and said retainer is at least partially received within said annular groove of said tubing end.

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19. A fluid line connector assembly according to claim 18, wherein said end fitting includes a radially outwardly extending annular groove, and said retainer is at least partially received within said annular groove of said end fitting.

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- 20. A method of assembling a fluid line connector assembly comprising the steps of:
- a) providing a length of flexible tubing having a tubing end, an end fitting having an inside wall at least partially forming a passage through said end fitting, and a sealing member;
- b) installing said sealing member on one of said tubing end and said end fitting;
- c) installing said end fitting on said tubing end such that said passage receives said tubing end and said sealing member is compressively positioned between said tubing end and said end fitting; and,
- d) forming a retainer on said tubing end to axially retain said end fitting thereon.
- 21. A fluid line connector assembly according to claim 20, wherein said step d) includes radially outwardly displacing a portion of said tubing end to form said retainer.
- 22. A fluid line connector assembly according to claim 21, wherein said retainer is substantially frustoconical.
- 23. A fluid line connector assembly according to claim 21, wherein said end fitting includes a radially outwardly extending groove, and said retainer is formed into said groove.